

O/PK

CRF Errors Corrected by the STIC Systems Branch

Serial Number:

09/236,995B

CRF Processing Date:

8/14/2001

Edited by:

Verified by:

(STIC sig)

ENTERED

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TECH CENTER 1600/2900

- ☐ Changed a file from non-ASCII to ASCII
- ☐ Changed the margins in cases where the sequence text was "wrapped" down to the next line.
- ☐ Edited a format error in the Current Application Data section, specifically: _____
- ☐ Edited the Current Application Data section with the actual current number. The number inputted by the applicant was ☐ the prior application data; or ☐ other _____
- ☐ Added the mandatory heading and subheadings for "Current Application Data".
- ☐ Edited the "Number of Sequences" field. The applicant spelled out a number instead of using an integer.
- ☐ Changed the spelling of a mandatory field (the headings or subheadings), specifically: _____
- ☐ Corrected the SEQ ID NO when obviously incorrect. The sequence numbers that were edited were: _____
- ☐ Inserted or corrected a nucleic number at the end of a nucleic line. SEQ ID NO's edited: _____
- ☐ Corrected subheading placement. All responses must be on the same line as each subheading. If the applicant placed a response below the subheading, this was moved to its appropriate place.
- ☐ Inserted colons after headings/subheadings. Headings edited included: _____
- ☐ Deleted extra, invalid, headings used by an applicant, specifically: _____
- ☒ Deleted: ☒ non-ASCII "garbage" at the beginning/end of files; ☐ secretary initials/filenam at end of file; ☐ page numbers throughout text; ☐ other invalid text, such as _____
- ☐ Inserted mandatory headings, specifically: _____
- ☐ Corrected an obvious error in the response, specifically: _____
- ☐ Edited identifiers where upper case is used but lower case is required, or vice versa.
- ☐ Corrected an error in the Number of Sequences field, specifically: _____
- ☐ A "Hard Page Break" code was inserted by the applicant. All occurrences had to be deleted.
- ☐ Deleted ending stop codon in amino acid sequences and adjusted the "(A)Length:" field accordingly (error due to a PatentIn bug). Sequences corrected: _____
- ☐ Other: _____

*Examiner: The above corrections must be communicated to the applicant in the first Office Action. DO NOT send a copy of this form.

3/1/95

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/236,995B

DATE: 08/14/2001
TIME: 15:54:41

Input Set : A:\Pto.amc
Output Set: N:\CRF3\08142001\I236995B.raw

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TECH CENTER 1600/2900

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3 <110> APPLICANT: Mahajan, Pramod B.
4   Zuo, Zhuang
6 <120> TITLE OF INVENTION: Poly ADP-Ribose Polymerase Gene and Its Uses
8 <130> FILE REFERENCE: 5718-34, 035718-174234
10 <140> CURRENT APPLICATION NUMBER: 09/236,995B
11 <141> CURRENT FILING DATE: 1999-01-26
13 <150> PRIOR APPLICATION NUMBER: 60/072,785
14 <151> PRIOR FILING DATE: 1998-01-27
16 <160> NUMBER OF SEQ ID NOS: 5
18 <170> SOFTWARE: PatentIn Ver. 2.1
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30 <221> NAME/KEY: misc_feature
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37 <223> OTHER INFORMATION: Xaa=unknown
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44 cgg gcc tcg tgc aag tca tgc cgg tcc cct atc gcc aag gac cag ctc      96
45 Arg Ala Ser Cys Lys Ser Cys Arg Ser Pro Ile Ala Lys Asp Gln Leu
46   20           25           30
48 cgt ctt ggc aag atg gtt cag gcg tca cag ttc gac ggc ttc atg ccg      144
49 Arg Leu Gly Lys Met Val Gln Ala Ser Gln Phe Asp Gly Phe Met Pro
50   35           40           45
52 atg tgg aac cat gcc agg tgc atc ttc agc aag aag aac cag ata aaa      192
53 Met Trp Asn His Ala Arg Cys Ile Phe Ser Lys Lys Asn Gln Ile Lys
54   50           55           60
56 tcc gtt gac gat gtt gaa ggg ata gat gca ctt aga tgg gat gat caa      240
57 Ser Val Asp Asp Val Glu Gly Ile Asp Ala Leu Arg Trp Asp Asp Gln
58   65           70           75           80
60 gag aag ata cga aac tac gtt ggg agt gcc tca gct ggt aca agt tct      288
61 Glu Lys Ile Arg Asn Tyr Val Gly Ser Ala Ser Ala Gly Thr Ser Ser
62   85           90           95
64 aca gct gct cct cct gag aaa tgt aca att gag att gct cca tct gcc      336
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RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/236,995B

DATE: 08/14/2001

TIME: 15:54:41

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70			115				120						125				
72	cgt	ctt	tca	gct	aag	ctt	gag	agt	gaa	ggt	ccc	aag	ggt	ata	cca	tgg	432
73	Arg	Leu	Ser	Ala	Lys	Leu	Glu	Ser	Glu	Gly	Pro	Lys	Gly	Ile	Pro	Trp	
74			130				135						140				
76	tat	cat	gcc	aac	tgt	ttc	ttt	gag	gta	tcc	ccg	tct	gca	act	gtt	gag	480
77	Tyr	His	Ala	Asn	Cys	Phe	Phe	Glu	Val	Ser	Pro	Ser	Ala	Thr	Val	Glu	
78	145					150					155					160	
80	aag	ttc	tca	ggc	tgg	gat	act	ttg	tcc	gat	gag	gat	aag	aga	acc	atg	528
81	Lys	Phe	Ser	Gly	Trp	Asp	Thr	Leu	Ser	Asp	Glu	Asp	Lys	Arg	Thr	Met	
82				165						170						175	
84	ctc	gat	ctt	gtt	aaa	aaa	gat	gtt	ggc	aac	aat	gaa	caa	aat	aag	ggt	576
85	Leu	Asp	Leu	Val	Lys	Lys	Asp	Val	Gly	Asn	Asn	Glu	Gln	Asn	Lys	Gly	
86				180						185						190	
88	tcc	aag	cgc	aag	aaa	agt	gaa	aat	gat	att	gat	agc	tac	aaa	tcc	gcc	624
89	Ser	Lys	Arg	Lys	Lys	Ser	Glu	Asn	Asp	Ile	Asp	Ser	Tyr	Lys	Ser	Ala	
90			195					200								205	
92	agg	tta	gat	gaa	agt	aca	tct	gaa	ggt	aca	gtg	cga	aac	aaa	ggg	caa	672
93	Arg	Leu	Asp	Glu	Ser	Thr	Ser	Glu	Gly	Thr	Val	Arg	Asn	Lys	Gly	Gln	
94			210					215								220	
96	ctt	gta	gac	cca	cgt	ggt	tcc	aat	act	agt	tca	gct	gat	atc	caa	cta	720
97	Leu	Val	Asp	Pro	Arg	Gly	Ser	Asn	Thr	Ser	Ser	Ala	Asp	Ile	Gln	Leu	
98	225					230						235				240	
100	aag	ctt	aag	gag	caa	agt	gac	aca	ctt	tgg	aag	tta	aag	gat	gga	ctt	768
101	Lys	Leu	Lys	Glu	Gln	Ser	Asp	Thr	Leu	Trp	Lys	Leu	Lys	Asp	Gly	Leu	
102				245						250						255	
104	aag	act	cat	gta	tcg	gct	gct	gaa	tta	agg	gat	atg	ctt	gag	gct	aat	816
105	Lys	Thr	His	Val	Ser	Ala	Ala	Glu	Leu	Arg	Asp	Met	Leu	Glu	Ala	Asn	
106				260						265						270	
108	ggg	cag	gat	aca	tca	gga	cca	gaa	agg	cac	cta	ttg	gat	cgc	tgt	gcg	864
109	Gly	Gln	Asp	Thr	Ser	Gly	Pro	Glu	Arg	His	Leu	Leu	Asp	Arg	Cys	Ala	
110			275							280						285	
112	gat	gga	atg	cta	ttt	gga	gcg	ctg	ggt	cct	tgc	cca	gtc	tgt	gct	aat	912
113	Asp	Gly	Met	Leu	Phe	Gly	Ala	Leu	Gly	Pro	Cys	Pro	Val	Cys	Ala	Asn	
114			290				295						300				
116	ggc	atg	tac	tat	tat	aat	ggt	cag	tac	caa	tgc	agt	ggt	aat	gtg	tca	960
117	Gly	Met	Tyr	Tyr	Tyr	Asn	Gly	Gln	Tyr	Gln	Cys	Ser	Gly	Asn	Val	Ser	
118	305					310					315					320	
120	gag	tgg	tcc	aag	tgt	aca	tac	tct	gcc	aca	gaa	cct	gtc	cgc	gtt	aag	1008
121	Glu	Trp	Ser	Lys	Cys	Thr	Tyr	Ser	Ala	Thr	Glu	Pro	Val	Arg	Val	Lys	
122				325						330						335	
124	aag	aag	tgg	caa	att	cca	cat	gga	aca	aag	aat	gat	tac	ctt	atg	aag	1056
125	Lys	Lys	Trp	Gln	Ile	Pro	His	Gly	Thr	Lys	Asn	Asp	Tyr	Leu	Met	Lys	
126				340						345						350	
128	tgg	ttc	aaa	tct	caa	aag	gtt	aag	aaa	cca	gag	agg	gtt	ctt	cca	cca	1104
129	Trp	Phe	Lys	Ser	Gln	Lys	Val	Lys	Lys	Pro	Glu	Arg	Val	Leu	Pro	Pro	
130			355							360						365	
132	atg	tca	cct	gag	aaa	tct	gga	agt	aaa	gca	act	cag	aga	aca	tca	ttg	1152

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137	Leu	Ser	Ser	Lys	Gly	Leu	Asp	Lys	Leu	Arg	Phe	Ser	Val	Val	Gly	Gln	
138	385						390				395					400	
140	tca	aaa	gaa	gca	gca	aat	gag	tgg	att	gag	aag	ctc	aaa	ctt	gct	ggt	1248
141	Ser	Lys	Glu	Ala	Ala	Asn	Glu	Trp	Ile	Glu	Lys	Leu	Lys	Leu	Ala	Gly	
142					405					410					415		
144	gcc	aac	ttc	tat	gcc	agg	ggt	gtc	aaa	gat	att	gat	tgt	tta	att	gca	1296
145	Ala	Asn	Phe	Tyr	Ala	Arg	Val	Val	Lys	Asp	Ile	Asp	Cys	Leu	Ile	Ala	
146				420					425					430			
148	tgt	ggt	gag	ctc	gac	aat	gaa	aat	gct	gaa	gtc	agg	aaa	gca	agg	agg	1344
149	Cys	Gly	Glu	Leu	Asp	Asn	Glu	Asn	Ala	Glu	Val	Arg	Lys	Ala	Arg	Arg	
150			435					440					445				
152	ctg	aag	ata	cca	att	gta	agg	gag	ggt	tac	att	gga	gaa	tgt	ggt	aaa	1392
153	Leu	Lys	Ile	Pro	Ile	Val	Arg	Glu	Gly	Tyr	Ile	Gly	Glu	Cys	Val	Lys	
154	450						455					460					
156	aga	aca	aaa	tgc	tgc	cat	ttg	att	tgt	ata	aac	tgg	aat	gcc	tta	gag	1440
157	Arg	Thr	Lys	Cys	Cys	His	Leu	Ile	Cys	Ile	Asn	Trp	Asn	Ala	Leu	Glu	
158	465					470					475					480	
160	tcc	tca	aaa	ggc	mgt	act	gtc	act	ggt	aaa	ggt	aag	ggc	cga	agt	gct	1488
W--> 161	Ser	Ser	Lys	Gly	Xaa	Thr	Val	Thr	Val	Lys	Val	Lys	Gly	Arg	Ser	Ala	
162				485						490					495		
164	tgt	tca	tya	agt	cct	cyg	ggt	tgc	aag	aat	act	gct	cac	att	cct	tra	1536
W--> 165	Cys	Ser	Xaa	Ser	Pro	Xaa	Val	Cys	Lys	Asn	Thr	Ala	His	Ile	Pro	Xaa	
166				500					505					510			
W--> 168	gra	tgg	gaa	aag	cat	ata	caa	tgc	amc	ctt	aaa	cat	ggt	ctg	acc	tgn	1584
W--> 169	Xaa	Trp	Glu	Lys	His	Ile	Gln	Cys	Xaa	Leu	Lys	His	Val	Leu	Thr	Xaa	
170			515					520					525				
W--> 172	cac	nag	gtg	tgy	aca	ggc	tac	tat	gta	ctc	cag	atc	att	gaa	cag	gat	1632
W--> 173	His	Xaa	Val	Cys	Thr	Gly	Tyr	Tyr	Val	Leu	Gln	Ile	Ile	Glu	Gln	Asp	
174		530					535					540					
176	gat	ggg	tct	gag	tgc	tac	gta	ttt	cgt	aag	tgg	gga	cgg	ggt	ggg	agt	1680
177	Asp	Gly	Ser	Glu	Cys	Tyr	Val	Phe	Arg	Lys	Trp	Gly	Arg	Val	Gly	Ser	
178	545					550					555					560	
180	gag	aaa	att	gga	ggg	caa	aaa	ctg	gag	gag	atg	tca	aaa	act	gag	gca	1728
181	Glu	Lys	Ile	Gly	Gly	Gln	Lys	Leu	Glu	Glu	Met	Ser	Lys	Thr	Glu	Ala	
182				565					570					575			
184	atc	aag	gaa	ttc	aaa	aga	tta	ttt	ctt	gag	aag	act	gga	aac	tca	tgg	1776
185	Ile	Lys	Glu	Phe	Lys	Arg	Leu	Phe	Leu	Glu	Lys	Thr	Gly	Asn	Ser	Trp	
186			580					585					590				
188	gaa	gct	tgg	gaa	tgt	aaa	acc	aat	ttt	cgg	aag	cag	cct	ggg	aga	ttt	1824
189	Glu	Ala	Trp	Glu	Cys	Lys	Thr	Asn	Phe	Arg	Lys	Gln	Pro	Gly	Arg	Phe	
190			595					600					605				
192	tac	cca	ctt	gat	ggt	gat	tat	ggt	ggt	aag	aaa	gca	cca	aaa	cgg	aaa	1872
193	Tyr	Pro	Leu	Asp	Val	Asp	Tyr	Gly	Val	Lys	Lys	Ala	Pro	Lys	Arg	Lys	
194		610					615					620					
196	gat	atc	agt	gaa	atg	aaa	agt	tct	ctt	gct	cct	caa	ttg	cta	gaa	ctc	1920
197	Asp	Ile	Ser	Glu	Met	Lys	Ser	Ser	Leu	Ala	Pro	Gln	Leu	Leu	Glu	Leu	

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DATE: 08/14/2001

PATENT APPLICATION: US/09/236,995B

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206          660          665          670
208 aat att gag raa gga ttt gaa gca tta act krg rta cmg rat tta ttt 2064
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210          675          680          685
W--> 212 gaa gga cac cgc tna tca agc act ggc ttg ttr gag aaa gct naa ttg 2112
W--> 213 Glu Gly His Arg Xaa Ser Ser Thr Gly Leu Xaa Glu Lys Ala Xaa Leu
214          690          695          700
216 ttg ytg sga gcm ats syt ttt tca ctc tta tcc ctt cta ttc atc ctc 2160
W--> 217 Leu Xaa Xaa Xaa Xaa Xaa Phe Ser Leu Leu Ser Leu Leu Phe Ile Leu
218 705          710          715          720
220 ata tta tac ggg atg agg atg att tca tat tca aag gcg aaa atg ctt 2208
221 Ile Leu Tyr Gly Met Arg Met Ile Ser Tyr Ser Lys Ala Lys Met Leu
222          725          730          735
224 gaa gct ctg cag gat att gaa att gct tca aag ata gtt ggc ttc gat 2256
225 Glu Ala Leu Gln Asp Ile Glu Ile Ala Ser Lys Ile Val Gly Phe Asp
226          740          745          750
228 agc gac agt gat gaa tct ctt gat gat aaa tat atg aaa ctt cac tgt 2304
229 Ser Asp Ser Asp Glu Ser Leu Asp Asp Lys Tyr Met Lys Leu His Cys
230          755          760          765
232 gac atc acc ccg ctg gct cac gat agt gaa gat tac aag tta att gag 2352
233 Asp Ile Thr Pro Leu Ala His Asp Ser Glu Asp Tyr Lys Leu Ile Glu
234          770          775          780
236 cag tat ctc ctc aac aca cat gct cct act cac aag gac tgg tcg ctg 2400
237 Gln Tyr Leu Leu Asn Thr His Ala Pro Thr His Lys Asp Trp Ser Leu
238 785          790          795          800
240 gaa ctg gag gaa gtt ttt tca ctt gat cga gat gga gaa ctt aat aag 2448
241 Glu Leu Glu Glu Val Phe Ser Leu Asp Arg Asp Gly Glu Leu Asn Lys
242          805          810          815
244 tac tca aga tat aaa aat aat ctg cat aac aag atg cta tta tgg cac 2496
245 Tyr Ser Arg Tyr Lys Asn Asn Leu His Asn Lys Met Leu Leu Trp His
246          820          825          830
248 ggt tca agg ttg acg aat ttt gtg gga att ctt agt caa ggg cta aga 2544
249 Gly Ser Arg Leu Thr Asn Phe Val Gly Ile Leu Ser Gln Gly Leu Arg
250          835          840          845
252 att gca cct cct gag gca cct gtt act ggc tat atg ttc ggc aaa ggc 2592
253 Ile Ala Pro Pro Glu Ala Pro Val Thr Gly Tyr Met Phe Gly Lys Gly
254          850          855          860
256 ctc tac ttt gca gat cta gta agc aag agc gca caa tac tgt tat gtg 2640
257 Leu Tyr Phe Ala Asp Leu Val Ser Lys Ser Ala Gln Tyr Cys Tyr Val
258 865          870          875          880
260 gat agg aat aat cct gta ggt ttg atg ctt ctt tct gag gtt gct tta 2688
261 Asp Arg Asn Asn Pro Val Gly Leu Met Leu Leu Ser Glu Val Ala Leu
262          885          890          895

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265 Gly Asp Met Tyr Glu Leu Lys Lys Ala Thr Ser Met Asp Lys Pro Pro
266          900          905          910
268 aga ggg aag cat tcg acc aag gga tta ggc aaa acc gtg cca ctg gag 2784
269 Arg Gly Lys His Ser Thr Lys Gly Leu Gly Lys Thr Val Pro Leu Glu
270          915          920          925
272 tca gag ttt gtg aag tgg agg gat gat gtc gta gtt ccc tgc ggc aag 2832
273 Ser Glu Phe Val Lys Trp Arg Asp Asp Val Val Pro Cys Gly Lys
274          930          935          940
276 ccg gtg cca tca tca att agg agc tct gaa ctc atg tac aat gag tac 2880
277 Pro Val Pro Ser Ser Ile Arg Ser Ser Glu Leu Met Tyr Asn Glu Tyr
278 945          950          955          960
280 atc gtc tac aac aca tcc cag gtg aag atg cag ttc ttg ctg aag gtg 2928
281 Ile Val Tyr Asn Thr Ser Gln Val Lys Met Gln Phe Leu Leu Lys Val
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291 <212> TYPE: PRT
292 <213> ORGANISM: Zea mays
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296 <222> LOCATION: (1)..(982)
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303 Arg Ala Ser Cys Lys Ser Cys Arg Ser Pro Ile Ala Lys Asp Gln Leu
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305 Arg Leu Gly Lys Met Val Gln Ala Ser Gln Phe Asp Gly Phe Met Pro
306          35          40          45
307 Met Trp Asn His Ala Arg Cys Ile Phe Ser Lys Lys Asn Gln Ile Lys
308          50          55          60
309 Ser Val Asp Asp Val Glu Gly Ile Asp Ala Leu Arg Trp Asp Asp Gln
310 65          70          75          80
311 Glu Lys Ile Arg Asn Tyr Val Gly Ser Ala Ser Ala Gly Thr Ser Ser
312          85          90          95
313 Thr Ala Ala Pro Pro Glu Lys Cys Thr Ile Glu Ile Ala Pro Ser Ala
314          100          105          110
315 Arg Thr Ser Cys Arg Arg Cys Ser Glu Lys Ile Thr Lys Gly Ser Val
316          115          120          125
317 Arg Leu Ser Ala Lys Leu Glu Ser Glu Gly Pro Lys Gly Ile Pro Trp
318          130          135          140
319 Tyr His Ala Asn Cys Phe Phe Glu Val Ser Pro Ser Ala Thr Val Glu
320 145          150          155          160
321 Lys Phe Ser Gly Trp Asp Thr Leu Ser Asp Glu Asp Lys Arg Thr Met
322          165          170          175

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VERIFICATION SUMMARY

PATENT APPLICATION: US/09/236,995B

DATE: 08/14/2001

TIME: 15:54:42

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Output Set: N:\CRF3\08142001\I236995B.raw

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L:165 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1
L:168 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1
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L:173 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1
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L:389 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2

RAW SEQUENCE LISTING

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DATE: 08/14/2001

TIME: 15:53:57

Input Set : A:\SEQUENCE LISTING.txt

Output Set: N:\CRF3\08142001\I236995B.raw

Does Not Comply
Corrected Diskette Needed

3 <110> APPLICANT: Mahajan, Pramod B.
 4 Zuo, Zhuang
 6 <120> TITLE OF INVENTION: Poly ADP-Ribose Polymerase Gene and Its Uses
 8 <130> FILE REFERENCE: 5718-34, 035718-174234
 10 <140> CURRENT APPLICATION NUMBER: 09/236,995B
 11 <141> CURRENT FILING DATE: 1999-01-26
 13 <150> PRIOR APPLICATION NUMBER: 60/072,785
 14 <151> PRIOR FILING DATE: 1998-01-27
 16 <160> NUMBER OF SEQ ID NOS: 5
 18 <170> SOFTWARE: PatentIn Ver. 2.1

ERRORED SEQUENCES

508 <210> SEQ ID NO: 5
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VERIFICATION SUMMARY

PATENT APPLICATION: US/09/236,995B

DATE: 08/14/2001

TIME: 15:53:58

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